

Application Number 10/522,030
Amendment dated June 18, 2008
Response to Office Action mailed March 18, 2008

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended) A sorption module comprising a generator section (7) connected via a first passage (3) to a condenser section (21), wherein the module contains a sorbent material (4) within its generator section (7) and a quantity of sorbate fluid, wherein characterised in that the condenser section (21) is connected by a second passage (25) to an evaporator section (26), the generator (7), condenser (21), and evaporator (26) sections being so arranged or interlinked such that liquid in the condenser section (21) is encouraged to flow to the evaporator section (26) and discouraged from flowing to the generator section (7) and the quantity of sorbate fluid and pressure within the module is such that, when the sorbent material is saturated with adsorbed or absorbed sorbate and at its lowest anticipated operating temperature, the evaporator section (26) is substantially filled with sorbate liquid (28).

Claim 2 (Currently Amended) [[A]] The sorption module according to of claim 1, wherein characterised in that the evaporator section (26) is located below the condenser section (21) and the second passage (25) is downwardly extending whereby liquid in the condenser section (21) is encouraged to flow into the evaporator section (26) under action of gravity.

Claim 3 (Currently Amended) [[A]] The sorption module according to of claim 1, wherein characterised in that the first (3) and second (25) passages comprise adiabatic sections (20, 25).

Claim 4 (Currently Amended) [[A]] The sorption module according to of claim 1, wherein characterised in that the condenser (21) and/or evaporator (26) sections have a surrounding arrangement of heat-conducting fins (22, 27).

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Claim 5 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 1, wherein
~~characterised in that the generator section (7) has an external arrangement of heat-conducting fins~~
~~(4).~~

Claim 6 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 1, wherein
~~characterised in that the generator section (7) has an internal arrangement of heat-conducting fins~~
~~(5) with one or more voids (6) sufficient to permit gas transport therebetween.~~

Claim 7 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 6, wherein
~~characterised in that the sorbent material (4) is solid and packed between the internal fins (5).~~

Claim 8 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 6, wherein
the sorbent material (4) is liquid and the first passage (3) extends upwardly within the sorbent
tube, its opening being located above the uppermost level of liquid sorbent.

Claim 9 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 1, wherein
~~characterised in that the sorbent material is chosen from one of the group of active carbons,~~
zeolites, silica gets, metal halides, metal alloys, water or a combination thereof.

Claim 10 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 9, wherein
~~characterised in that the sorbate fluid is chosen from one of the group of ammonia, water,~~
alcohols, hydrogen, hydrocarbons, hydrofluorocarbons and carbon dioxide.

Claim 11 (Currently Amended) ~~[[A]] The sorption module according to~~ of claim 1,
~~characterised in that it further includes comprising~~ a porous plug (29) of inert material within the
second passage (25).

Claims 12-32 (Canceled).